Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method for communicating in a wireless multi-hop system having at least one base station, at least one relay station, and user equipment, the method comprising:

~~communicating between a relay station and a base station using a first radio interface;~~

~~communicating~~ facilitating, at a first relay station, a communication between user equipment and the first relay station using a second radio interface; and

multiplexing the communication between the first relay station and a base station and between the first relay station and a second relay station using a first radio interface to create a plurality of simultaneous data streams; and

processing the communication between the first relay station and the base station with the first radio interface separately from the communication between the user equipment and the first relay station.

2. (Currently amended) The method of claim 1, further comprising ~~multiplexing communication between the relay station and the base station and~~ communicating the communication between the second relay station and ~~at least one other relay~~ the base station ~~to create multiple simultaneous data streams~~.

3. (Currently amended) The method of claim 2, wherein the second relay station ~~is not directly connected to the base station but is connected to~~ communicates directly with the base station ~~through at least two different relay stations~~.

4. (Canceled)

5. (Currently amended) The method of claim [[4]] 1, further comprising dynamically reusing communication resources between the user equipment and the ~~multiple~~ first and second relay stations.

6. (Currently amended) The method of claim 1, wherein communicating between user equipment and the first relay station comprises communicating a relay station specific pilot signal.

7. (Original) The method of claim 1, wherein the second radio interface comprises multiple input multiple output transmissions.

8. (Original) The method of claim 1, wherein the first radio interface and the second radio interface operate using a common frequency bandwidth.

9. (Currently amended) The method of claim 1, wherein the first radio interface comprises a macroscopic multiplexing ~~where the relay station is connected to the base station directly and also via at least one other relay station~~.

10. (Original) The method of claim 1, further comprising sharing resources between communication using the first radio interface and communication using the second radio interface, wherein the first radio interface and the second radio interface operate using different categories of communication links.

11. (Currently amended) The method of claim 10, wherein the different categories of communication links are selected from ~~comprises~~ multi-carrier modulation, spread-spectrum transmission, frequency division duplexing, and time division duplexing.

12. (Currently amended) A wireless communication system having a base station and a relay station that communicate with user equipment, the system comprising:

a base station having a first radio transceiver and being connected to a core network; and

a first relay station having a second radio transceiver and being configured to simultaneously communicate with the base station and with a second relay station using a first

radio interface and being configured to communicate with; ~~and~~ user equipment having a third radio transceiver ~~and being configured to communicate with the relay station~~ using a second radio interface, wherein the operation of the first radio interface and the second radio interface are separate from each other.

13. (Original) The system of claim 12, wherein the operation of the first radio interface and the second radio interface includes, at least in part, using the same frequency bandwidth.

14. (Currently amended) The system of claim 12, further comprising ~~at least one other~~ the second relay station ~~being~~ configured to communicate with ~~the relay station and~~ the base station.

15. (Canceled)

16. (Canceled)

17. (Currently amended) A device configured for operation in a wireless multi-hop communication environment, the device comprising:

a radio interface that simultaneously communicates with a base station and with a second relay station using a first radio interface ~~relay stations in a multi-hop communication environment~~; and

a processor coupled to the radio interface, the processor providing commands for multiple input, multiple output communication via the radio interface when high data rates are needed.

18. (Original) The device of claim 17, wherein the radio interface comprises multiple antennas.

19. (Original) The device of claim 17, wherein the radio interface communicates a relay station specific pilot signal.

20. (Original) The device of claim 17, further comprising a memory apparatus containing identification information.

21. (Original) The device of claim 17, wherein the radio interface communicates using time division multiple access.

22. (Canceled)

23. (Canceled)

24. (Canceled)